



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

KE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,323	01/05/2001	Masatoshi Akagawa	1081.1102	3680

21171 7590 06/18/2002

STAAS & HALSEY LLP
700 11TH STREET, NW
SUITE 500
WASHINGTON, DC 20001

EXAMINER

BRAIRTON, SCOTT A

ART UNIT	PAPER NUMBER
----------	--------------

2823

DATE MAILED: 06/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/754,323

Applicant(s)

AKAGAWA, MASATOSHI

Examiner

Scott A Brairton

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 2823

DETAILED ACTION

Drawings

Figure 1A-1D should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al (U.S. Patent No. 6,137,163). Kim et al disclose in figures 1-5C and related text a semiconductor device comprising a base substrate (figure 5C, 100) on one surface of which wiring patterns are formed (figure 5C, 26); a plurality of insulating layers (non-conductive substrates) located on and above the surface thereof (figure 5C, 110 and 120); conductor layers having wiring patterns formed therein and located on the insulating layer (figure 4D, 22 and 26); semiconductor elements (figure 4D, 33) imbedded and mounted inside the insulating layer wherein the wiring patterns are mutually electrically connected (figure 5C, 26), passing through the insulating layers and the semiconductor elements are electrically connected to the wiring patterns (figure 4D, 35)

Art Unit: 2823

and wherein two or more semiconductor elements are imbedded and mounted inside each of said plurality of insulating layers (figure 5C).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al as applied to claims 1-3 above, and further in view of Itabashi et al (U.S. Patent No. 6,300,244). Kim fails to expressly disclose electrically connecting the wiring pattern to the semiconductor element by flip chip mounting and via an anisotropically conductive film. Itabashi discloses in figures 1-11 and related text electrically connecting a wiring pattern to a semiconductor element by flip chip mounting and, inherently, by an anisotropically conductive film (figure 10 and col. 17, lines 10-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Itabashi with the method of Kim in order to provide excellent anti-shock resistance and connection reliability (col. 13, lines 35-45).

It is held that the selection of the semiconductor element thickness is obvious because it is a matter of determining optimum process conditions by routine experimentation with a limited number of species. In re Jones, 162 USPQ 224 (CCPA 1955)(the selection of optimum ranges

Art Unit: 2823

within prior art general conditions is obvious) and In re Boesch, 205 USPQ 215 (CCPA 1980)(discovery of optimum value of result effective variable in a known process is obvious).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Brairton whose telephone number is (703) 605-4213. The examiner can normally be reached on M-F, 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4082 for regular communications and (703) 746-4082 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Scott A Brairton
Examiner
Art Unit 2823

sab
June 13, 2002

L. Ph
LONG PHAM
PRIMARY EXAMINER